We claim:

1. An automated device for imaging and diagnosis of a target, comprising:

   an endoscope,

   a first means for performing a white-light assessment of the target, and

   a second means for performing an additional assessment of the target as a background task.

2. The device of claim 1, wherein said additional assessment comprises at least one fluorescence imaging mode.

3. The device of claim 1, wherein said additional assessment comprises at least one of reflectance spectroscopy and fluorescence spectroscopy.

4. The device of claim 3, wherein said additional assessment further comprises at least one fluorescence imaging mode.

5. The device of claim 1, further comprising means for performing an action based on said additional assessment.

6. The device of claim 5, wherein said action comprises at least one of an audible alert and a visible alert.

7. The device of claim 6, further comprising means for manually changing a visual output mode after said alert.

8. The device of claim 7, wherein said means for manually changing further comprises at least one of means for displaying fluorescence images, means for displaying spectroscopic data, means for displaying composite images, means for highlighting said visual output mode, means for delineating regions of said visual output mode and means for overlaying said visual output

24

mode.

9.   The device of claim 7, further comprising means for automatically changing a visual output mode after said alert.

10.   The device of claim 9, wherein said means for automatically changing further comprises at least one of means for displaying fluorescence images, means for displaying spectroscopic data, means for displaying composite images, means for highlighting said visual output mode, means for delineating regions of said visual output mode and means for overlaying said visual output mode.

11.   The device of claim 1, further comprising means to calculate a quantitative score based on said additional assessment.

12.   The device of claim 11, further comprising means to compare said quantitative score to a benchmark score.

13.   The device of claim 11, further comprising means to display said quantitative score and said benchmark score.

14.   The device of claim 1, further comprising means for performing an action based on said additional assessment and on prior information relating to the target.

15.   The device of claim 14, wherein said action comprises at least one of an audible alert and a visible alert.

16.   The device of claim 15, further comprising means for manually changing a visual output mode after said alert.

17.   The device of claim 16, wherein said means for manually changing further comprises at least one of means for displaying fluorescence images, means for displaying spectroscopic data,

means for displaying composite images, means for highlighting said visual output mode, means for delineating regions of said visual output mode and means for overlaying said visual output mode.

18. The device of claim 15, further comprising means for automatically changing a visual output mode after said alert.

19. The device of claim 18, wherein said means for automatically changing further comprises at least one of means for displaying fluorescence images, means for displaying spectroscopic data, means for displaying composite images, means for highlighting said visual output mode, means for delineating regions of said visual output mode and means for overlaying said visual output mode.

20. The device of claim 14, further comprising means to calculate a quantitative score based on said additional assessment and on prior information relating to the target.

21. The device of claim 20, further comprising means to compare said quantitative score to a benchmark score.

22. The device of claim 20, further comprising means to display said quantitative score and said benchmark score.

23. The device of claim 1, further comprising means for performing an action based on said additional assessment and an analysis from a plug-in analyzer.

24. The device of claim 23, wherein said plug-in analyzer comprises at least one of a Raman probe, a fluorescence excitation-emission matrix spectroscopy probe, an optical coherence tomography probe, and a confocal microscopy probe.

25. The device of claim 23, wherein said action comprises at least one of an audible alert and

a visible alert.

26. The device of claim 25, further comprising means for manually changing a visual output mode after said alert.

27. The device of claim 26, wherein said means for manually changing further comprises at least one of means for displaying fluorescence images, means for displaying spectroscopic data, means for displaying composite images, means for highlighting said visual output mode, means for delineating regions of said visual output mode and means for overlaying said visual output mode.

28. The device of claim 25, further comprising means for automatically changing a visual output mode after said alert.

29. The device of claim 28, wherein said means for automatically changing further comprises at least one of means for displaying fluorescence images, means for displaying spectroscopic data, means for displaying composite images, means for highlighting said visual output mode, means for delineating regions of said visual output mode and means for overlaying said visual output mode.

30. The device of claim 1, further comprising means to calculate a quantitative score based on said additional assessment and an analysis from a plug-in analyzer.

31. The device of claim 30, further comprising means to compare said quantitative score to a benchmark score.

32. The device of claim 30, further comprising means to display said quantitative score and said benchmark score.

33. The device of claim 1, further comprising an endoscopy positioning system.

34.   An automated method for imaging and diagnosing a target, comprising:

illuminating the target with white light; and

assessing the target as a background task.

35.   The method of claim 34, wherein said assessing step comprises at least fluorescence imaging.

36.   The method of claim 34, wherein assessing step comprises at least one of reflectance spectroscopy and fluorescence spectroscopy.

37.   The method of claim 36, wherein said assessing step further comprises at least fluorescence imaging.

38.   The method of claim 34, further comprising performing an action based on a result of said assessing step.

39.   The method of claim 38, wherein said action comprises at least one of an audible alert and a visible alert.

40.   The method of claim 39, further comprising manually changing a visual output mode after said alert.

41.   The method of claim 40, wherein said manually changing step further comprises at least one of displaying fluorescence images, displaying spectroscopic data, displaying composite images, highlighting said visual output mode, delineating regions of said visual output mode and overlaying said visual output mode.

42.   The method of claim 39, further comprising automatically changing a visual output mode after said alert.

43.   The method of claim 42, wherein said means for automatically changing step further

comprises at least one of displaying fluorescence images, displaying spectroscopic data, displaying composite images, highlighting said visual output mode, delineating regions of said visual output mode and overlaying said visual output mode.

44. The method of claim 34, further comprising calculating a quantitative score based on said additional assessment.

45. The method of claim 44, further comprising comparing said quantitative score to a benchmark score.

46. The method of claim 44, further comprising displaying said quantitative score and said benchmark score.

47. The method of claim 34, further comprising performing an action based on said additional assessment and on prior information relating to the target.

48. The method of claim 47, wherein said action comprises at least one of an audible alert and a visible alert.

49. The method of claim 48, further comprising manually changing a visual output mode after said alert.

50. The method of claim 49, wherein said manually changing step further comprises at least one of displaying fluorescence images, displaying spectroscopic data, displaying composite images, highlighting said visual output mode, delineating regions of said visual output mode and overlaying said visual output mode.

51. The method of claim 48, further comprising automatically changing a visual output mode after said alert.

52. The method of claim 51, wherein said automatically changing step further comprises at

least one of displaying fluorescence images, displaying spectroscopic data, displaying composite images, highlighting said visual output mode, delineating regions of said visual output mode and overlaying said visual output mode.

53. The method of claim 47, further comprising calculating a quantitative score based on said additional assessment and on prior information relating to the target.

54. The method of claim 53, further comprising comparing said quantitative score to a benchmark score.

55. The method of claim 53, further comprising displaying said quantitative score and said benchmark score.

56. The method of claim 34, further comprising performing an action based on said additional assessment and an analysis from a plug-in analyzer.

57. The method of claim 56, wherein said plug-in analyzer comprises at least one of a Raman probe, a fluorescence excitation-emission matrix spectroscopy probe, an optical coherence tomography probe, and a confocal microscopy probe.

58. The method of claim 56, wherein said action comprises at least one of an audible alert and a visible alert.

59. The method of claim 58, further comprising manually changing a visual output mode after said alert.

60. The method of claim 59, wherein said manually changing step further comprises at least one of displaying fluorescence images, displaying spectroscopic data, displaying composite images, highlighting said visual output mode, delineating regions of said visual output mode and overlaying said visual output mode.

61. The method of claim 58, further comprising automatically changing a visual output mode after said alert.

62. The method of claim 61, wherein said automatically changing step further comprises at least one of displaying fluorescence images, displaying spectroscopic data, displaying composite images, highlighting said visual output mode, delineating regions of said visual output mode and overlaying said visual output mode.

63. The method of claim 34, further comprising calculating a quantitative score based on said additional assessment and an analysis from a plug-in analyzer.

64. The method of claim 63, further comprising comparing said quantitative score to a benchmark score.

65. The method of claim 63, further comprising displaying said quantitative score and said benchmark score.

66. The method of claim 34, further comprising using an endoscopy positioning system.